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MAY, 1986 THE HUGgers NEWSLETTER VOLUME 4, NUMBER 2

THE OFFICER'S CORNER

The HUG elections are over, and the results are as follows: Greg Larson will be assumming the office of Secretary, and the rest of the Officers were re-elected.

Since we are beginning a new year (our fifth to be exact), I would like to take the time and space to say again that the group needs volunteers to schedule and present workshops and to write articles for the Newsletter on all areas of our favorite computer. Whether it be as simple as a program to print return address labels or as complex as hardware modifications to your computer and peripherals. The sharing of information benefits everyone.

Plans are being made for a Picnic at the June Monthly Meeting. More details will follow at this meeting and in the June Newsletter.

THE NEXT MONTHLY MEETING WILL BE
MAY 11, 1986
STARTING AT 2:00 PM AT CREATIVE LOGIC
SEE YOU THERE!

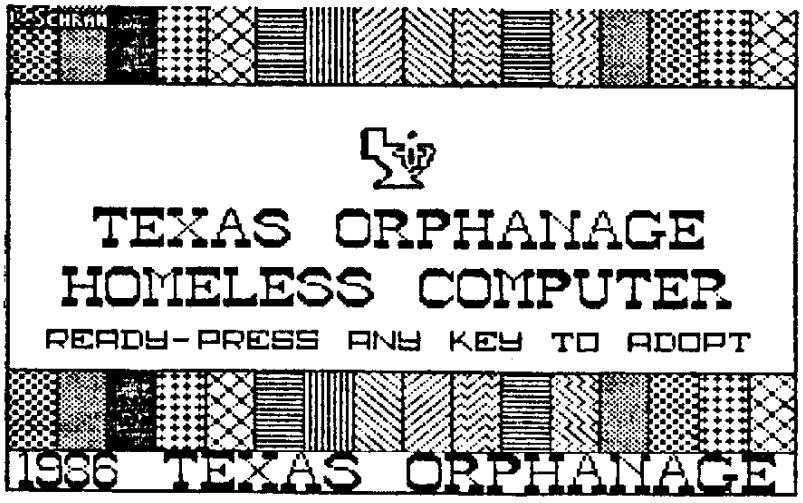
WORKSHOPS: MYARC'S EXTENDED BASIC
PROGRAMMER'S CORNER

SOUTH REGIONAL MEETING

Wednesday, May 21st
starting at 7:00 pm

The graphics dump, below, is by Chris and Martha Schram. It is reprinted from the May, 1986 issue of "Bits & Bytes," Newsletter of the South Bay TI Users Group of San Jose, California. It pretty well sums up the situation the TI'ers are in and is reprinted here for your enjoyment.

Welcome to the "Orphanage"! Have a Happy Mothers Day, and we'll see you at the May 11th Meeting! J.Steven Sims



HAPPY BIRTHDAY!

A Happy HUGger Birthday to Jerry Ford, who joined in May, 1985.... It's time to renew!

WELCOME!

The Hoosier Users Group would like to welcome the following new members:

In March..... Randy Blackwood, John Carver, Jr., Doug Thompson, Kevin Van Hook, and Mark Gritton.

In April..... Daniel Streib and Steven Shirley.

WELCOME BACK!

The Hoosier Users Group would like to welcome back these renewing members:

In March..... Charley Trotter, Carl and Brian Richwine, David Artman, Clemet Woest, Ken Burrell, Russell Pitz, and Dan Poe.

In April..... Carl and Mary Rose Clark, Ed Lewis, Gary Rhodes, Steve Bundy, Thomas Walker and Frank Escamilla, Jr.

REGIONAL NEWS
SOUTH REGIONAL MEETING

Date: Weds. May 21, 1986
Time: 7:00 P.M.
Location: 4582 Moccasin Pl.
Greenwood.
Directions/Information: 881-5918

All members are welcome to attend. An updated version of the group's library is available for your use. Meeting topics are generally determined by the interests of those present. Usually members will bring programs they have written, typed, or acquired (non-copyright), and share them with the group.

NORTH • 7120 Zionsville Rd. (Park 100) • 297-5817
DOWNTOWN • 34 N. Delaware St. • 637-8282
SOUTH • County Line Mall • 882-2000

LIBRARY BITS

By Dennis Sherfy

One of our new members added a music program to our library that should really catch your attention. It's on a disk called MUSIC DEMO. It shows you something of the TI's capability for both music and graphics in assembly language. The TI-99/4A is criticised for it's slow Basic language, but it has a very fast assembly language. This program is loaded and run with Option 3 on the Editor/Assembler Cartridge. You enter "DSK1.POP". The program contains a main menu that list four songs: Amorada, In The Mood, Flohwalzer, and The Charleston. When you are playing the songs, you can speed them up, or slow them down, by pressing the "+" or "-" keys. You return to the main menu by pressing FCTN 9 (Back), and you quit by turning off your console.

For those of you who do not have the Editor/Assembler Cartridge, we have a disk-based E/A program added to our library. I will report on this program next month to see if this music can be played with it. You may be able to run this, and other Assembly Language programs without buying the Editor/Assembler Cartridge if you have a full system, (disk drive, Extended Basic, and 32K).

In the May '85 issue of our HUG Newsletter, I reported on the program LOANCALC. This program could be very usefull to you now as mortgage rates have been declining to the point where many people are re-financing their homes. If you have a mortgage at 12%, when would it be cost-effective to refinance? When the rate declines to 10%? 9.5%? 9.0%? You need to know the total cost of paying off your mortgage at the current rate, then compare that to the lower rate, plus any points that you pay. This program can help you make that decision.

TITAN, on Extended 1, is a game program. Your challenge is to land a rocket on a landing pad. You control your rockets direction of thrust as you attempt to maneuver over the landing pad, then land at a speed that doesn't result in a crash.

The level of difficulty is controlled in this game by changing the vertical distance to the landing pad. The shorter the distance, the more difficult it is to maneuver the rocket.

Programmers will find the code for controlling the sprite (the rocket) interesting.

TI Writer: New character set with control U

By Dennis Wood

From the day I started using TI-Writer I longed for a better character set and an easier way of controlling my printer's special functions. The TI-Writer upgrade gave us lower case characters, but at the expense of smaller, harder to read characters. What was needed was lowercase, but as large as possible, consistant with the 6x8 pixel size available. With this in mind, I designed a new set of upper and lower case characters. In order to get decenders for the lowercase characters and still retain the uppercase size, I merely shifted the uppercase characters up one raster line. Since all 24 lines of text are all shifted up by the same amount, there is no difference on the screen. As TI-Writer loads the CHARA1 file the uppercase characters shift up one raster line. By doing this I could now define lowercase characters with a one line decender. The final result is uppercase characters defined in a 5x7 matrix and lowercase characters defined in a 5x5 matrix with an additional row below for decenders.

While doing this I had to learn how to read, decipher and change the CHARA1 file. As a result, I also discovered how the ASCII characters from 1 to 31 were defined. For example, the little cr at the end of each paragraph is represented by the ASCII 13 character. The other characters are shown on page 146 of the TI-Writer manual. After reading William Bullock's fine article in the September 1985 MICROPendium I realized how to get to the objective I sought. What was needed was a set of characters that would indicate what action was desired of the printer, and a Transliteration file that would take that character and transliterate it into the desired printer codes. I took the ASCII codes from 1 to 31 and defined a set of characters that would represent desired printer actions, such as Underline or Bold or Italic. To insert these characters in a document it is only necessary to type CTRL U followed by a specific SHIFT or FCTN and a number or letter. When TI-Writer encounters this combination in a text file it sends that ASCII code to the printer. In order to get the printer to execute the desired function, it is necessary to transliterate that ASCII code into the sequence the particular brand of printer requires. There does not seem to be a standard set of codes, but most printers seem to be pretty close.

The following is a description of the special characters, the function they represent, what key to strike, and a transliteration file for a C. Itoh Prowriter Jr. Note: TI-Writer Transliteration software does not pass certain ASCII codes. These are:

These keystrokes are preceded by a CTRL U and followed by a CTRL U.

FUNCTION	CHARACTER	KEYSTROKE	TRANSLITERATION
NLQ On	Large L	FCTN R	TL 27:27,120,1
NLQ Off	Inverse L	Shift R	TL 18:27,120,0
Italic On	Large I	FCTN T	TL 29:27,52
Italic Off	Inverse I	Shift T	TL 20:27,53
Underline On	Large U	FCTN U	TL 31:27,45,1
Underline Off	Inverse U	Shift U	TL 21:27,45,0
Superscript On	Up Arrow	Shift E	TL 5:27,83,0
Subscript On	Down Arrow	Shift X	TL 24:27,83,1
Either Off	Inverse Arrow	Shift D	TL 4:27,84
8cpi	Small 08	Shift Y	TL 25:(not Itoh)
Pica (10cpi)	Small 10	Shift A	TL 1:27,80
Elite (12cpi)	Small 12	Shift I	TL 9:27,77

This article is reprinted from the Puget Sound 99ers of Lynnwood, Washington

TI Writer, Continued....

Condensed On	Large	C	Shift H	TL 8:15
Condensed Off	Inverse	C	Shift K	TL 11:18
Expand On	Large	X	Shift F	TL 6:27,87,1
Expand Off	Inverse	X	Shift G	TL 7:27,87,2
Proportional On	Large	P	Shift P	TL 16:27,112,1
Proportional Off	Inverse	P	Shift O	TL 15:27,112,0
Bold On	Large	B	Shift B	TL 2:27,71
Bold Off	Inverse	B	Shift V	TL 22:27,72
Emphasized On	Large	E	FCTN 7	TL 28:27,69
Emphasized Off	Inverse	E	Shift Z	TL 26:27,70
Backspace	Back Arrow		Shift S	TL 19:8
8 lpi	Small	L8	Shift 2	TL 0:27,48
7/72" line space	Small	L9	Shift C	TL 3:27,49
6 lpi	Small	L6	Shift Q	TL 17:27,50
4 lpi	Small	L4	Shift W	TL 23:27,65,18
3 lpi	Small	L3	Shift N	TL 14:27,65,24

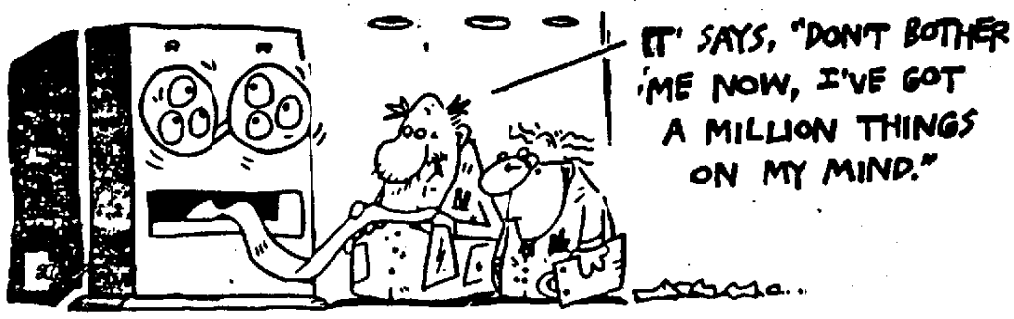
Reserved characters are:

Line Feed	Small LF	Shift J	TL 10:
New Page	Small PA	Shift L	TL 12:
Carriage Return	Small CR	Shift M	TL 13:
Cursor	Rectangle	Shift 6	TL 30:

A disk with the redefined upper and lowercase characters, and the above control characters as well instructions and examples for setting up an Include File (IF) for transliteration codes is available from the library or:

Dennis Wood
16709 SE 31st
Bellevue WA, 98008

Please send $5 to cover the cost of the disk, duplicating, and mailing.



NEWSLETTER GLEANINGS

by Jim Ellis

An undesirable part of this feature is that some of the information is outdated before it gets to you. Rather than tell you what you have missed out on, I shall forge ahead with more current items of interest.

We recently received a flyer announcing COMPUTERFEST '86. It is to be held at the HARA ARENA, Aug. 23-24 1986, in Dayton, OH, from 10:00 a.m. to 6:00 p.m. both days. The Arena may be accessed from I-75 at the Needmore Exit (exit 58). The fee for the flea market is $10 before July 1, $15 after July 1. The spaces are 8'x6' with 8' table and chair. No charge for elect., but bring your own extension cord. For more info contact Mark Hanslip at (513)268-7225 or write: Computerfest '86, 143 Schloss Ln. Dayton, OH, 45418-2931.

For those of you needing supplies, Arvey Paper Supplies, located at 1021 North Penn. St., City, handle a wide range of needs. Their tx is (317)634-3227.

For those of you who say, "Mother, I'd rather do it myself," A-JEM CO. of Cedar Rapids, Ia, offer for your construction, the APE Modem, priced at $135.00 plus $5 shipping. Info is provided as to power requirements so you can get it from your existing equipment or you can order the optional power supply at $15.95. The RS-232 interface for Comm-64 or TI-99/4A is $8. Oh yes, it is 300/1200 baud.

Computer Bargain Line is another of many publications that contains many ads from suppliers of misc. items, disk drives, diskettes, etc. It is available by subscription at reasonable rates.

For those who have branched out to other computers, we often receive mail about products for other brands. However, I shall not mention name brands.

HCM DIES at age SIX

An Editorial Comment by
Don MacClellan - Bluegrass 99 Computer Society

Two notices arrived this month - one unexpected and the other long overdue. The first is the announced merger of The Smart Programmer by Craig Miller and Super 99 Monthly edited by Richard Mitchell. Both Miller and Mitchell have through their own initiative and talent, published newsletters as a part-time venture which have contained valuable, timely and useful information. Unfortunately for their publication schedules, as often happens when ambitious and talented persons begin, it opens additional avenues and projects, which is obviously the case with Miller. Since he began publication of the Smart Programmer, he has produced Advanced Diagnostics, Explorer, Gram Kracker and a soon to be released PEB card for a remote IBM keyboard. It is understandable that the monthly issues began to come every two months or three or four.

Mitchell, on the other hand, has produced an informative technically oriented publication on a monthly basis since September 1984. He has done it with little or no advertising support. For this reason, the format has remained 16 pages, as did the The Smart Programmer. Mitchell has been consistant, resourceful and has published significant and helpful articles in every issue. You will not find a more capable partnership.

The combination of these two 16 page publications into a single monthly 'technical' journal will not produce more text initially but will almost guarantee a quality monthly publication which will certainly be an asset to every TI owners library. I, for one, wish them the best of luck and encourage all TI owners to support the merged publication with your subscription.

The expected notice to which I referred is that of Home Computer Magazine; formally 99er Home Computer which was formally 99er Magazine. It is dissappointing to say the least to see HCM cease publication. It is by far the most professionally produced magazine-format publication for the TI computer. It will be replaced by HCJournal effective with the next issue for those subscribers that are still trying to fill their initial 36 month subscription.

It is a small wonder that 99er Magazine has survived at all - an independent publication which supported the TI-99/4 computer series. 99er was 'Gut shot' (as they say in the old West) by Texas Instruments and caught with all of their bullets in the wrong gun. The aftermath of that wounding was the evolution of a magazine which had to depend on a wider readership to survive. One that drew upon advertising revenues from multiple sources and one that had wider appeal. One consequence of that forced action was, of course, some dilution in coverage for the TI.

They lingered despite being severly hampered by the discontinuance of TI computer production, because they continued to maintain quality. It is my opinion that their demise is largely a result of their inability to publish a magazine on a predictable schedule. You may not remember the long delay that occurred in the Winter of '83 when the magazine changed from 99er Home Computer to HCM and again in in the winter of '84 but I think those delays cost them most of their TI advertising support - Christmas ads which were never run - and credibility which heretofore was not questioned. In my opinion, the announcement of their decision to eliminate advertising and depend upon subscription revenues had to be based upon the lack of confidence and subsequent disappearance of advertisers. A National Geographic with 8,000,000 subscribers or a Consumer Reports with 3,000,000 they are not. This forfeiture or disappearance of advertising revenues - the life blood of any other magazine - had to be, at the time it occured, a premonition of death.

It always was a full time staffed - full blown, large magazine format, which was expensive to produce and we will all be loosers for the loss of it to a far greater extent than the few subscription dollars at risk. The publication provided continuity and cohesiveness when none other was there.

This is not to take away from the sincerity and dedication of Gary Kaplan and his staff who certainly have to be commended for holding HCM together as long as they could. They had to be inundated with an ocean of simple economic reality. They have to be very talented people who will develop new creative avenues - and I wish them loads of luck because it is certainly deserved. How an expensive quarterly Journal will do remains to be seen, however, if it meets the need, and can make a profit, we will all be the benefactors.

There are many technical speciality magazines which have extremely low subscription rates which are made possible by advertising revenues. They are almost always worth the small subscription cost just to have access to the current advertisements: i.e. Popular Photography, Computer Shopper, Henning's etc. I find it difficult to believe that timely product advertising can be separated from editorial content since they normally compliment each other. Product ads inform as well as produce revenue. Subscriptions barely support postage costs: the salaries, printing and other costs must be supported by advertising. The best example of that is the only other successful TI monthly - Micropendium - which is substantially supported by advertising: Primarily by Tex-Comp. Without advertising support all of the specialty magazines would be 16 pages.

These market forces were not only affecting HCM - We saw the same thing happen to COMPUTE! after December '83. That was their largest issue - both in editorial content, articles and advertising. The over anticipation for acceptance and potential for the Home Computer market left manufacturers with large inventories after Christmas, a computer price war, a major pull-back on advertising, and computer companies failing at an unprecedented rate. COMPUTE! later lamented in a subsequent issue that its advertising was down to below a third of its December '83 issue; a 392 page issue vs 168 and 215 pages of ads vs 61. After its initial TI coverage in January '83, it saw near the end of 1984, that almost no advertising support had developed from the TI community - and you know what happened from there. Dropped like a hot potato ! Sure they still have Regena but I would be willing to bet it is because Regena is a smart cookie - she probably has a contract - and as soon as that expires - THUD!

It is a shame too - for COMPUTE! had, at its TI peak, top notch coverage, good articles and excellent programs that rivaled HCM. They still have a book division that has published more and better books for the TI (and for that matter most home computers) than any other publisher before or since. For that they are to be applauded and more importantly patronized.

The purpose of this discourse is to mark the passing of all but two monthly TI publications. While the stories may seem complex, the cause is simple. ECONOMICS! Without a major manufacturer's support, the vitality of these and any others which might evolve will depend upon the significant financial support of the TI community - owners as well as manufacturers. If you are not a subscriber, I recommend that you become one - for your own good. The cost for both is less than a moderately priced item of software.

The Smart Programmer
171 Mustang Street
Sulphur, LA 70663
$15.00 annually

MICROpendium
P.O.Box 1343
Round Rock, TX 78680
$15.00 annually

PRINTER CONTROL CHARACTER/CODE

CROSS REFERENCE CHART

NAME OF PRINTER	EPSON MX80	PROWRITER	GEMINI-10X
CARRIAGE RETURN	CHR$(13)	CHR$(13)	CHR$(13)
LINE FEED	CHR$(10)	CHR$(10)	CHR$(10)
FORM FEED (TOP OF PAGE)	CHR$(12)	CHR$(12)	CHR$(12)
FORM LENGTH = ##	CHR$(27)&"C"&CHR$(##)		CHR$(27)&"C"&CHR$(##)
COMPRESSED MODE = ON	CHR$(15) [SI]	CHR$(27)&"Q"	CHR$(15) [SI]
COMPRESSED MODE = OFF	CHR$(18)		
DBL. WIDTH MODE = ON	CHR$(14) [SO]	CHR$(14) [SO]	CHR$(14) [SO]
DBL. WIDTH MODE = OFF	CHR$(20)	CHR$(15)	CHR$(20)
EMPHASIS MODE = ON	CHR$(27)&"E"		
EMPHASIS MODE = OFF	CHR$(27)&"F"		
DBL. STRIKE MODE = ON	CHR$(27)&"G"	CHR$(27)&"!"	
DBL. STRIKE MODE = OFF	CHR$(27)&"H"	CHR$(27)&CHR$(34)	
TO SET HORIZONTAL TABS	CHR$(27)&"D"	CHR$(27);CHR$(40); "###".	CHR$(27)&"D"&CHR$(##)
## = SPECIFIC TAB	&CHR$((1<=##<=80 OR 132)+128)	CHR$(27);CHR$(41);"###"	.... &CHR$(#)&CHR$(0)
END TAB SET STMT	&CHR$(0 + 128)	(ABOVE CODE CLEARS TAB)	
TO TAB ACROSS	CHR$(9 + 128)	CHR$(9)	
TO CLEAR ALL TABS		CHR$(27);CHR$(48)	
TO SET VERTICAL TABS	CHR$(27)&"B"		CHR$(27);CHR$(80);CHR$(##);
## = SPECIFIC TAB	&CHR$(1<=64 + 128)		CHR$(##); ... CHR$(0)
END TAB SET STMT	&CHR$(0 + 128)		
TO TAB DOWN	CHR$(11 + 128)	CHR$(11)	CHR$(11)
CANCEL PRINT & RESET	CHR$(24)	CHR$(24)	
DELETE DATA & RESET	CHR$(127)	CHR$(127)	CHR$(127)
LINE SPACING	CHR$(27)&CHR$(0<=#<2)		CHR$(27);CHR$(#)
	IF # = 0, SPACE=1/8	CHR$(27);"B"	IF # = 48, SPACE=1/8
	IF # = 1, SPACE=7/72	CHR$(27);"T";"14"	IF # = 49, SPACE=7/72
	IF # = 2, SPACE=1/6	CHR$(27);"A"	IF # = 50, SPACE=1/6
	(IF PREVIOUS SETTING)		
PRINTER ON [DC1]	CHR$(17)		
(DEVICE SELECT)			
PRINTER OFF [DC3]	CHR$(19)		
(DEVICE UN-SELECT)			
BACKSPACE		CHR$(8)	CHR$(8)
PICA FONT (10 CPI)		CHR$(27);"N"	CHR$(27);CHR$(66);CHR$(1)
ELITE FONT (12 CPI)		CHR$(27);"E"	CHR$(27);CHR$(66);CHR$(2)
PROPORTIONAL SPACING		CHR$(27);"P"	
FORWARD PRINT		CHR$(27);"f"	
REVERSE PRINT		CHR$(27);"r"	
UNDERLINING = ON		CHR$(27);"X"	
UNDERLINING = OFF		CHR$(27);"Y"	

Note: This table is intended to list a variety of useful printer commands for some of the most popular printers. This table is not guaranteed to be totally correct nor is this table intended to represent all of the possible printer commands for these printers. In actuality, these printers have graphic control commands which are not shown in this table. For exact definitions of your printer's control codes, please refer to printer manual.

TIPS FROM THE TIGERCUB

#3#

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TIGERCUB SOFTWARE
156 Collingwood Ave.
Columbus, OH 43213.

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Over 13# original programs in Basic and Extended Basic, available on cassette or disk, only $3.## each plus $1.5# per order for PPH. Entertainment, education, programmer's utilities.
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Tips from The Tigercub, a full disk containing the complete contents of this newsletter Nos. 1 through 14, 5# original programs and files, just $15 postpaid.
Tips from the Tigercub Vol. 2, another diskfull, complete contents of Nos. 15 through 24, over 6# files and programs, also just $15 postpaid. Or, both for $27 postpaid.
Nuts & Bolts (No. 1), a full disk of 1## Extended Basic utility subprograms in merge format, ready to merge into your own programs. Plus the Tigercub Menuloader, a tutorial on using subprograms, and 5 pages of documentation with an example of the use of each subprogram. All for just $19.95 postpaid.
Nuts & Bolts No. 2, another full disk of 1## utility subprograms in merge format, all new and fully compatible with the last, and with 1# pages of documentation and examples. Also $19.95 postpaid, or both Nuts Bolts disks for $37 postpaid.
Tigercub Full Disk Collections, just $12 postpaid! Each of these contains either 5 or 6 of my regular $3 catalog programs, and the remaining disk space has been filled with some of the best public domain programs of the same category. I am NOT selling public domain programs - my own programs on these disks are greatly discounted from their usual price, and the public domain is a FREE bonus!
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BRAIN BUSTERS!
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KID'S GAMES
MORE GAMES
WORD GAMES
ELEMENTARY MATH
MIDDLE/HIGH SCHOOL MATH
VOCABULARY AND READING
MUSICAL EDUCATION
KALEIDOSCOPES AND DISPLAYS
For descriptions of these send a dollar for my catalog!

I goofed again! If you tried the Quickloader in Tips #29 with a disk containing more than 2# programs, you may have already noticed that line 14# should go to 16#, not 155.

Here's another Tigercub Challenge - can you run this and get these results?

```
>LIST
18# PRINT PI
11# PRINT MAX
12# PRINT PI
13# PRINT MAX
>RUN
 3
 3
 3.141592654

* SYNTAX ERROR IN 13#
```

Some of you sharp-eyed newsletter editors may have noticed that this text is being hyphenated to avoid some of those gaping blanks that occur when only a few long words will fit on a right-justified line. The only way that I have found to accomplish this is to set the TI-Writer right tab for the actual column width to be printed and then, whenever a word is hyphenated, backspace and replace the blanks on that line with carets, adding enough extra carets to justify the line - like this -

whenever^a^word^^is^^hyphen-

It helps to go into fixed mode with CTRL 9 when you are inserting extra carets.
When using this method, it is also necessary to set the paragraph indentation with IN 9 on the command line; if indentations are desired, they can be filled with caret signs, like this:
^^When using this method,

I am told that my old 3D Sprite Routine made it to the Golden Quickies section of CompuServe, so here is an updated version. I have found that sprites can be controlled much more easily (although not moved as rapidly) with CALL LOCATE, rather than turning them loose with CALL MOTION and then trying to catch up with them!

```
1## CALL CLEAR :: CALL SCREEN(5):: FOR SET=2 TO 8 :: CALL COLOR(SET,8,5):: NEXT SET :: DISPLAY AT(3,12):"3-D SPRITE DEMO"
11# DISPLAY AT(22,1):"BY TIGERCUB" :: CALL CHAR(4#,"FF81818181818181FF818181818181FFFF#181818181818181FF#181818181811FF")
12# CALL CHAR(36,RPT$("F",64)):: CALL MAGNIFY(4):: FOR X=2 TO 22 STEP 2 :: CALL SPRITE(#X,36,X/2+1-(X>7)-(X>13),32+X*6,4#+X*6):: NEXT X
13# S=1 :: CALL SPRITE(#S,4#,16,46,7):: FOR C=6 TO 42 STEP 2 :: CALL LOCATE(#S,46,C) :: NEXT C :: FC=44 :: FR=46 :: Y=#
14# FOR C=FC TO FC+44 STEP 2 :: CALL LOCATE(#S,FR,C):: NEXT C :: FC=FC+44 :: CALL SPRITE(#S+2,4#,16,FR,FC):: CALL DELSPRITE(#S):: TC=FC-32
15# FOR C=FC TO TC STEP -2 :: CALL LOCATE(#S+2,FR,C):: NEXT C :: TR=FR+34 :: FOR R=FR TO TR STEP 2 :: CALL LOCATE(#S+2,R,TC):: NEXT R
16# CALL SPRITE(#S,4#,16,TR,TC):: CALL DELSPRITE(#S+2):: FR=TR :: TR=FR-72 :: FOR R=FR TO TR STEP -2 :: CALL LOCATE(#S,R,TC):: NEXT R
17# CALL SPRITE(#S+2,4#,16,TR,TC):: CALL DELSPRITE(#S):: FR=TR :: TR=FR+5# :: FOR R=FR TO TR STEP 2 :: CALL LOCATE(#S+2,R,TC):: NEXT R
18# Y=Y+1 :: IF Y=11 THEN CALL DELSPRITE(#S+2):: GOTO 13# ELSE S=S+2 :: FC=TC :: FR=TR :: GOTO 14#
```

Ian Swales in Belgium can write some of the most intricate routines, and pull them into the tightest knot. I had searched everywhere for a sorting routine for 2-dimensional arrays, and invented some ridiculous ones, before Ian sent me this jewel.

```
1## !DEMO of two-dimensional sorting routine
11# !Set up array to be sorted
12# CALL CLEAR :: DIM A$(2#,4):: RANDOMIZE :: DEF X$=CHR$(26*RND+65)
13# FOR J=1 TO 2# :: A$(J,1)=X$&X$&X$ :: A$(J,2)=STR$(INT(1##*RND+1)):: A$(J,3)=X$&STR$(INT(1#*RND)):: A$(J,4)=INT(1#*RND)&X$ :: NEXT J
14# INPUT "SORT BY?(1-4)":K
15# J=2# !2-dimensional array sorting routine by Ian Swales
```

```
160 DIM Q(20):: FOR X=1 TO 2
0 :: Q(X)=X :: NEXT X
170 M=0
180 FOR X=1 TO J-1 :: IF A$(
Q(X),K)<=A$(Q(X+1),K)THEN 21
0
190 M=-1
200 T=Q(X):: Q(X)=Q(X+1):: Q
(X+1)=T
210 NEXT X
220 IF M THEN 170
230 FOR X=1 TO 20 :: FOR L=1
 TO 4 :: PRINT A$(Q(X),L);"
";:: NEXT L :: PRINT :: NEXT
 X :: GOTO 140
```

Did you ever need a routine that would accept either a string or a numeric value? Try this -

```
100 N=0 :: ON ERROR 110 :: A
CCEPT N$ :: N=VAL(N$):: GOTO
 120
110 ON ERROR STOP :: RETURN
120
120 ON (N=0)+2 GOTO 130,140
130 PRINT N$ :: GOTO 100
140 PRINT N :: GOTO 100
```

A useful tip from Stephen Shaw in England - if you have a long program which wil run only in Basic, and which will load from disk with CALL FILES(1) but runs out of memory when you try to run it; and if you have the minimemory module -
Insert MiniMemory module, select Basic, enter CALL FILES(1), Enter NEW, enter OLD DSK1.(filename). When loaded, enter SAVE EXPMEM2. When SAVEd, enter CALL LOAD(-31888,63,255), enter NEW, enter OLD EXPMEM2, and enter RUN. That is still a lot faster than loading a long program from tape!

Another reason for never using the default mode of so-called UPDATE when opening a file (without specifying INPUT or OUTPUT) is that you will get an I/O ERROR #1 if the file is write-protected.

Has anyone found a way to go from Extended Basic to Basic without losing the program in memory, or at least fouling it up?
CALL LOAD(-32116,4) has been published in many newsletters as a way to do this, but has anyone actually made it work?

If you are printing out of TI-Writer Editor, finish your letter with CTRL U, SHIFT L, CTRL U and when it is printed the paper will automatically feed to the top of the next sheet.

To make a note to yourself while programming, just type 1! and whatever you want to make note of, then LIST "PIO":1, and then type 1 and enter to delete the line.

TI-Writer puts an extra space after every period that is followed by a space. If you don't want this extra space after abbreviations such as "Mr." or St.", use a caret sign ^ instead of a space after the period, Mr.^Jones. But TI-Writer puts only one space after ? or ! so if you want two, put a caret after the symbol !^

One of the very best tips for this month comes from Paul A. Meadows, in the September 85 newsletter of T.I.N.S. (Nova Scotia, Canada) -
How to print up to 132 characters in a line (condensed print, of course) out of TI-Writer! Just prepare your file as usual but in line 9991 put formatter commands such as .LM 10;RM 132; IN +5;FI;AD . The Fill and Adjust are necessary, the Indent is up to you, as are the left and right margins - but notice that right margin set way over at 132?
Now, instead of saving the file with SF, type PF and then C DSK1.(filename) to print to the disk. This not only strips out the control C characters, it also erases the TI-Writer tab line that was applied to the last line of the file.
So now, with your printer opened and initialized for condensed print, go into the TI-Writer formatter mode and print your file!

I have made the following changes to my working copy of the Tigercub Menuloader. This sets up my Gemini printer to skip over the perforations and print full page width in elite print with a wide left margin for ring-binder punching. Other printers may need changes in these codes.

```
620 DISPLAY AT(12,1)ERASE AL
L:"PRINTER? PIO" :: ACCEPT A
T(12,18)SIZE(-18):P$ :: GOSU
B 895 :: PP=3
840 DISPLAY AT(24,1):"PRINTE
R NAME? PIO" :: ACCEPT AT(24
,15)SIZE(-14):PP$ :: GOSUB 8
95 :: PRINT #2:SEG$(D$,1,4)&
" - Diskname= "&N$
895 OPEN #3:P$,VARIABLE 132
:: PRINT #3:CHR$(27);"B";CHR
$(2);CHR$(27);"M";CHR$(18);C
HR$(27);"N";CHR$(6):: RETURN
```

I always keep a backup of everything, on the flipped side of another disk, and I often want to verify that the backup has everything that is on the master, and vice versa.

```
100 DISPLAY AT(3,6)ERASE ALL
:"TIGERCUB DOUBLECAT": :" To
 compare the contents of": :
"a disk with a backup." !by
Jim Peterson
110 DISPLAY AT(12,1):"INSERT
 MASTER DISK": :"PRESS ENTER
"
120 CALL KEY(0,K,S):: IF S=0
 THEN 120
130 DATA DF,DV,IF,IV,P
140 RESTORE :: FOR I=1 TO 5
:: READ T$(I):: NEXT I
150 DIM F$(127):: OPEN #1:"D
SK1.",INPUT ,RELATIVE,INTERN
AL :: INPUT #1:A$,J,J,K :: F
$(0)=A$&" "&STR$(K)
160 X=X+1 :: INPUT #1:F$(X)
I,J,K :: IF F$(X)="" THEN 17
0 :: F$(X)=F$(X)&" "&T$(ABS(
I)):: GOTO 160
170 X=X-1 :: CLOSE #1 :: DIS
PLAY AT(12,1)ERASE ALL:"REMO
VE MASTER DISK": :"INSERT BA
CKUP DISK": :"PRESS ENTER"
180 CALL KEY(0,K,S):: IF S=0
 THEN 180
190 OPEN #1:"DSK1.",INPUT ,R
ELATIVE,INTERNAL :: INPUT #1
:A$,J,J,K :: DISPLAY AT(1,1)
ERASE ALL:F$(0);:: DISPLAY A
T(1,15):A$&" "&STR$(K);
200 Y=Y+1 :: R=R+1 :: GOSUB
290 :: INPUT #1:A$,I,J,K ::
IF A$="" THEN 260 :: K$=A$&"
 "&T$(ABS(I))
210 IF K$<F$(Y)THEN DISPLAY
AT(R+1,1):F$(Y);:: DISPLAY A
T(R+1,15):K$;:: GOTO 250
220 IF K$<F$(Y)THEN DISPLAY
AT(R+1,15):K$;:: Y=Y-1 :: GO
TO 250
230 DISPLAY AT(R+1,1):F$(Y)
:: R=R+1 :: GOSUB 290 :: Y=Y
+1
240 IF K$=F$(Y)THEN 210 ELSE
 IF K$<F$(Y)THEN 220 ELSE IF
 Y<X THEN 230 ELSE DISPLAY A
T(R,15):K$;
250 GOTO 200
260 IF Y>X THEN 280
270 R=R+1 :: GOSUB 290 :: FO
R J=Y TO X :: DISPLAY AT(R,1
):F$(J):: R=R+1 :: GOSUB 290
 :: NEXT J
280 DISPLAY AT(24,1):"     P
RESS ANY KEY" :: CALL KEY(0,
K,S):: IF S=0 THEN 280 ELSE
CLOSE #1 :: END
290 IF R<23 THEN RETURN
300 DISPLAY AT(24,1):"PRESS
ANY KEY" :: DISPLAY AT(24,1)
:" " :: CALL KEY(0,K,S):: IF
 S=0 THEN 300
310 CALL CLEAR :: R=1 :: RET
URN
```

And that is just about

MEMORY FULL!

Jim Peterson

HOOSIER USERS GROUP DIRECTORY

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MONTHLY MEETING LOCATION

Creative Logic
8240 Indy Lane
Indianapolis, IN 46224

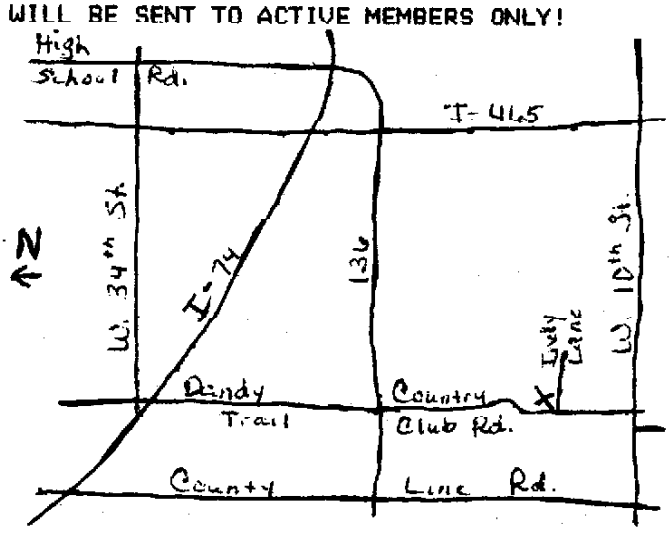
(About 1800 North Country Club Road)

NEWSLETTER EXCHANGE

The Hoosier Users is participating in a Newsletter Exchange program with other TI Users Groups. This offer is made with the understanding that, with proper credit, your Users Group can reprint articles from the Hoosier Users Group Newsletter, and with proper credit, we can reprint articles from other TI Users Groups Newsletters.

PRINTOUTS

Library listings can be ordered for $.25 & a 6x9 self addressed envelope with $.66 postage. The HUGbbs Reference Guide can be ordered for $.50 and a 4x9 self addressed envelope with $.22 postage. Please send orders to our P.O. Box. SORRY, PRINTOUTS WILL BE SENT TO ACTIVE MEMBERS ONLY!



HUGbbs INFORMATION

317-631-994A

The HUGbbs operates on a 24 hour basis.

SPONSOR THE HUGbbs: Any member or retail business can sponsor the HUGbbs. For a $5.00 donation, you get 5 (40 column) lines on the Log-On Title Screen for a week (or for a $10.00 donation, you get 10 (40 column) lines) plus a 24 line by 40 character ad in the Sales option of the File Module. To sponsor the HUGbbs, send a check or money order to our P.O. Box (or turn in at our Monthly Meeting) specifying how many weeks (and how many lines) you want to sponsor, your name (or company name), address, phone, what you want to say, and the week (and an alternate week) you want the ad to appear.*

BACK ISSUES

Back Issues purchased at the monthly meeting is $1.00 each. Mail order price is $1.50 per Newsletter (postage included). Orders will be filled within 3 weeks of receipt by the Documents Committee.

ADVERTISING POLICIES

There will be no charge for advertisements submitted to the HUGger Newsletter by members (for private sale only). Format for the advertisements is 45 characters wide by 10 lines long. The Ad should be typed or hand printed exactly how it is to appear in the Newsletter. Deadline for an ad to appear in next month's Newsletter is the 2nd Saturday of the month.*

For companies who wish to advertise in the HUGger Newsletter, our rates are as follows:

Pre-Printed Inserts (one page) $20.00
One Full Page (one sided) Ad: $25.00
One Half Page Ad: $13.00
One Quarter Page Ad: $7.00

All ads must be in a ready to print condition. Advertisements must be in our P.O. Box before the 2nd Saturday of the month to appear in the following month's Newsletter.*

***NOTE:** The Officers of the Hoosier Users Group reserve final approval on all advertisements submitted for the HUGger Newsletter and the HUGbbs. The Officers and the Newsletter committee are not responsible for typographical errors due to illegible advertisements. All proceeds are accepted as donations to the Hoosier Users Group.

TIME DATED
MAY 7 1986
MATERIAL

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Indianapolis, IN 46206-2222

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APPLICATION FOR MEMBERSHIP

Below you will find an application for membership to the Hoosier Users Group. Active membership entitles you to the Newsletter, up and download on the HUGbbs, attendance and voting rights at regular club meetings, access to the HUGger Library of Programs, special club activities and special guest speakers for one year. Subscribing members will receive the **NEWSLETTER** only.

Make check or money order payable to **Hoosier Users Group.** Send completed application to:

HOOSIER USERS GROUP
P.O. Box 2222
Indianapolis, IN 46206-2222

(Cut on dotted line)

Check One:

Active Member

New: $20 ____
Renewal: 15 ____

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Amount Enclosed: $ ____

____ D ____
S ____ MAY 7 1986

Name: _____ Today's Date: _____

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Interests/Comments: _____